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EXAMINER

ROSSI, JESSICA

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/936,457

Applicant(s)

WHITWORTH, IAN JAMES

Examiner

Jessica L. Rossi

Art Unit

1733

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/9/05, Amendment.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 37-47 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-11 and 37-47 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment dated 11/9/05. Claims 37-47 were added. Claims 1-11 and 37-47 are pending. Support for the limitations added to claim 1 and set forth in claim 37 is found on p. 5, lines 19-24 and p. 8, lines 3-12.
2. The rejection of claim 1 under 35 USC 102(e) as being anticipated by Mossbeck et al. (US 6143122; of record), as set forth in paragraph 4 of the previous action, has been withdrawn in light of the present amendment and Applicants relating thereto – while Mossbeck teaches varying the amount and/or distribution of adhesive on the surface of an individual pocket found within a string of pocketed coil springs, he teaches the amount and/or distribution of adhesive on the surface of an individual pocket being the same as that found on all pockets within the string.
3. The rejection of claim 1 under 35 USC 103(a) as being unpatentable over Suenens et al. (US 5016305, of record) in view of Mossbeck et al., as set forth in paragraph 8 of the previous action, has been withdrawn for the reasons set forth above with respect to the Mossbeck reference.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
5. Claims 1-2, 5-9, 11, 37-38, 41-45 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Jorgensen (WO 97/37569).

Art Unit: 1733

With respect to claim 1, Jorgensen is directed to a method for the manufacture of an innerspring assembly 1 (p. 5, lines 31-32). The reference teaches positioning a first string 3 of pocketed coil springs 10 in juxtaposition with a plurality of adhesive applicators/nozzles 19 disposed in mutually fixed relation on an axis parallel to a longitudinal axis of the first string (Figure 8; p. 7, lines 33-34; p. 8, line 34 – p. 9, line 6; p. 4, lines 23-25), applying adhesive 6 from the applicators to the pockets 10 of the first string, wherein the amount and/or distribution of adhesive applied to each individual pocket is varied relative to the amount and/or distribution of adhesive applied to other pockets (note adhesive applicators/nozzles can be programmed to apply adhesive only on each second pocket of the string - therefore the quantity of adhesive applied to an individual pocket can be zero while the quantity of adhesive applied to other pockets can be greater than zero; **p. 11, lines 16-18**; p. 4, lines 5-25; p. 9, lines 17-33), and bringing the first string into adhesive contact with a second string (p. 8, lines 1-6).

With respect to claim 37, all the limitations were addressed above with respect to claim 1 except the innerspring assembly comprising at least one region in which the first and second strings are connected by first quantities of adhesive applied to the pockets of those strings, and at least one region in which the first and second strings are connected by second quantities of adhesive applied to the pockets of those strings, the second quantities of adhesive being less than the first quantities of adhesive.

The examiner directs Applicant's attention to Figures 4-6 and 8 of Jorgensen, which depict only a few of the adhesive patterns envisaged by the reference. The skilled artisan can readily appreciate that the depicted patterns clearly have one region associated with first

Art Unit: 1733

quantities of adhesive and another region associated with a second quantities of adhesive that are less than the first quantities of adhesive (p. 6, lines 12-30).

Regarding claims 2, 5-9, 11, 37-38, 41-45 and 47, the reference teaches such.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen in view of Mossbeck et al. (US 6143122, of record).

With respect to claim 37, if it is not taken that Jorgensen teaches second adhesive quantities being less than first adhesive quantities, it would have been obvious to apply an adhesive pattern to the pockets of Jorgensen such that a first region (i.e central region of pocket) would have more adhesive than a second region because such an adhesive distribution is known in the art, as taught by Mossbeck (column 3, lines 35-42), where such a distribution produces a greater bonding strength between the strings since the central portion of each pocket is typically the primary contact region between the strings (Mossbeck, column 3, lines 35-42).

8. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen as applied to claim 1 above and further in view of Suenens et al. (US 5637178).

It would have been obvious to feed the string of Jorgensen longitudinally along to position the string into juxtaposition with the adhesive applicators so that adhesive can be applied thereto and then tip the string into an upright position such that the string can be brought

Art Unit: 1733

into contact with the second string because such is known in the art, as taught by Suenens (Figure 6; column 1, lines 40-65; column 3, lines 22-48; column 6, lines 17-65) because apply adhesive to the string while it is in a horizontal position prevents the adhesive from running and distorting the desired adhesive pattern.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen as applied to claim 1 above and further in view of Suenens et al. (US 5016305, of record).

Regarding claims 10 and 46, it would have been obvious to keep the string stationary and move the applicators as an alternative to moving the string and keeping the applicators stationary because such is known in the art, as taught by Suenens (column 4, lines 60-64; column 5, lines 15-18), and only the expected results would be achieved.

10. Claims 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen, or Jorgensen and Mossbeck, as applied to claim 37 above and further in view of Suenens '178.

Please see paragraph 8 above.

11. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen, or Jorgensen and Mossbeck, as applied to claim 37 above and further in view of Suenens '305.

Please see paragraph 9 above.

12. Claims 1-5 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suenens '305 in view of Jorgensen.

With respect to claim 1, Suenens is directed to a method for the manufacture of an innerspring assembly (column 2, lines 17-18). The reference teaches positioning a first string 1 of pocketed coil springs 3 in juxtaposition with an adhesive applicator 11 (Figure 6; column 4, lines 60-62; column 5, lines 14-17), applying adhesive from the applicator to pockets 3 of the first

Art Unit: 1733

string (column 4, lines 45-47 and 57-66), wherein the amount and/or distribution of adhesive applied to each individual pocket is varied relative to the amount and/or distribution of adhesive applied to other pockets (note adhesive can applied to every pocket, every other pocket, every other two pockets, or every three pockets of the string - therefore the quantity of adhesive applied to an individual pocket can be zero while the quantity of adhesive applied to other pockets can be greater than zero; Figure 5; column 4, lines 45-47 and 64-66), and bringing the first string into adhesive contact with a second string (Figure 7; column 6, line 67 – column 7, line 4). Suenens teaches the adhesive applicator being disposed on an axis parallel to the longitudinal axis of the string but is silent as to there being a plurality of applicators disposed in mutually fixed relation on the axis parallel to the longitudinal axis of the string.

It is known in the art to apply adhesive to a string of pocketed coil springs using a plurality of applicators disposed in mutually fixed relation on an axis parallel to a longitudinal axis of the string where the applicators can be individually programmed such that adhesive can be applied in a particular pattern to the pockets and/or such that adhesive can be applied to every other pocket, as taught by Jorgensen (see paragraph 5 above for complete discussion).

One reading Suenens as a whole would have appreciated that the reference is not concerned with the particulars of an adhesive applicator and therefore it would have been obvious to the skilled artisan at the time the invention was made to use a plurality of applicators disposed in mutually fixed relation on an axis parallel to a longitudinal axis of the first string of Suenens to apply adhesive to the pockets because such is known in the art, as taught by Jorgensen, wherein a plurality of individually controlled applicators makes it easier to apply adhesive to a pocket in a

Art Unit: 1733

more controlled manner and within a shorter period of time while also allowing some pockets to not receive any adhesive at all.

Regarding claim 2, Jorgensen teaches simultaneously applying adhesive from the applicators (see paragraph 5 above).

Regarding claim 3, Suenens teaches the first string being positioned into juxtaposition with the adhesive applicators by being fed longitudinally along (Figure 6), and then displaced transversely from (Figure 7), an axis parallel to the longitudinal axis of the first string; note “longitudinal axis” of the string is taken as the length of string.

Regarding claim 4, Suenens teaches tipping the first string into an upright position such that the surface of the first string to which adhesive has been applied is brought into contact with the surface of the second string (Figure 7; column 4, line 67 – column 5, line 4).

Regarding claim 5, Suenens teaches the second string having immediately beforehand been processed in the same manner as the first string (column 5, lines 2-4).

Regarding claim 7, Suenens teaches the adhesive being a hot melt (column 2, lines 66-68).

Regarding claim 8, Suenens teaches the applicator can be in a fixed, stationary position relative to the first string (column 4, lines 60-64).

Regarding claim 9, Suenens alternatively teaches moving the applicator relative to the first string (column 5, lines 15-18).

Regarding claim 10, Suenens alternatively teaches the first string being stationary and moving the applicator (column 5, lines 15-18).

Art Unit: 1733

Regarding claim 11, Suenens teaches the adhesive being dispensed from the applicators while movement of the first string relative to the applicators is taking place (column 4, lines 60-64).

13. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suenens '305 and Jorgensen as applied to claim 1 above, and further in view of the collective teachings of Eto (US 5792309, of record), Suenens et al. (EP 421495, of record) and Mossbeck (US 6159319, of record).

Regarding claim 6, Suenens '305 teaches positioning the first string using a conveyor and tilting the first string to bring it into contact with the second string, but is silent as to these movements being brought about by mechanical means using electrical, hydraulic, or pneumatic power.

It is known in the art to adhesively bond strings of pocketed coil springs using a fully automated process wherein motor driven conveyors are used to move the strings through different stages of the process, as taught by Eto (column 3, lines 39-41 and 55-56; column 4, lines 12-18; column 5, lines 47-49). It is also known in the art to bring a first string into contact with a second string to adhesively bond the same using a tilting device that receives the first string from a conveyor, as taught by Suenens '495 (column 2, lines 4-15). It is also known in the art to bring a first string into contact with a second string to adhesively bond the same using a pneumatically powered tilting device, as taught by Mossbeck '319 (column 6, lines 56-61).

Therefore, it would have been obvious to the skilled artisan at the time the invention was made to move the first string of Suenens '305 using mechanical means such as motor-driven conveyors and a pneumatically powered tilting device because such is known in the art, as taught

Art Unit: 1733

by the collective teachings of Eto, Suenens '495, and Mossbeck '319, wherein such allows for a continuous process.

The skilled artisan would have appreciated that the conveyor motor would have to be driven by some type of power source while also appreciating that electrical, hydraulic, and pneumatic power sources for driving motors are well known and conventional. Therefore, it would have been obvious to the skilled artisan to use any one of these sources to power the motor because only the expected results would have been achieved.

14. Claims 37-41 and 43-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suenens '305 and Jorgensen as applied to claim 1 above, and further in view of Mossbeck '122.

With respect to claim 37, all the limitations were addressed above with respect to claim 1 except the innerspring assembly comprising at least one region in which the first and second strings are connected by first quantities of adhesive applied to the pockets of those strings, and at least one region in which the first and second strings are connected by second quantities of adhesive applied to the pockets of those strings, the second quantities of adhesive being less than the first quantities of adhesive.

It would have been obvious to apply the adhesive to the pockets of Suenens such that a first region (i.e central region of pocket) would have more adhesive than a second region because such an adhesive distribution is known in the art, as taught by Mossbeck (column 3, lines 35-42), where such a distribution produces a greater bonding strength between the strings since the central portion of each pocket is typically the primary contact region between the strings (Mossbeck, column 3, lines 35-42).

Regarding claims 38-41 and 43-47, please see the rejection of claims 2-5 and 7-11 above.

Art Unit: 1733

15. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suenens '305, Jorgensen and Mossbeck '122 as applied to claim 37 above, and further in view of the collective teachings of Eto, Suenens '495 and Mossbeck '319.

Regarding claim 42, please see rejection of claim 6 above.

Response to Arguments

16. Applicant's arguments with respect to claims 1 and 37 have been considered but are moot in view of the new ground(s) of rejection.

It is noted that Mossbeck '122 is only being used as a secondary reference in the present office action to show it being known in the art to apply adhesive to the pockets of a string such that a first region (i.e central region of pocket) would have more adhesive than a second region in order to produce a greater bonding strength between the strings since the central portion of each pocket is typically the primary contact region between the strings (Mossbeck, column 3, lines 35-42).

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 1733

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jessica L. Rossi** whose telephone number is **571-272-1223**. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard D. Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JESSICA ROSSI
PRIMARY EXAMINER

